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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/061,976	01/31/2002	Vidya Renganarayanan	112-0018US	9126

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EXAMINER

TRAN, VINCENT HUY

ART UNIT	PAPER NUMBER
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2115

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/061,976

Applicant(s)

VIDYA RENGANARAYANAN

Examiner

Vincent T. Tran

Art Unit

2115

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 January 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

1. Claims 1-17 are pending for examination

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Du et al U.S. Patent 6,714,611 in view of Shibata U.S. Patent 6,640,338 and Mankovitz U.S. Patent RE38,600.
4. Du et al teach a method of maintaining distributed time in a network having a plurality of timekeeping devices include a primary timekeeping entity, each time keeping device comprising a network node [abstract, fig. 1], the method comprising the steps of:

Du et al inherently teach entering the time using an input mechanism¹ on a first timekeeping device [col. 4 lines 48-52];

sending the time from the first timekeeping device² to the primary timekeeping entity [col. 4 lines 16-18];

broadcasting a time update from the primary timekeeping entity to all other timekeeping entities [col. 4 lines 16-19]; the broadcast repeating every T1(q) seconds and carrying an indication of the current time [col. 5 lines 59-61, col. 6 lines 1-7];

¹ Device includes an internal or external user interface, via which the user data is supplied and read out [col. 3 lines 11-12].

² Network node 2 is referred to as the master user clock [col. 3 lines 51-53].

Du et al teach each network node 1 to 4 includes a user time counter which receives clock pulses from the relevant local user clock supply. The user time counter enables the local user clock supply in each network node to be synchronized. However, Du et al fails to teach the receiving of time update at a second timekeeping and starting a counting device upon the receipt.

Shibata teaches another system for distributing broadcast signal in a broadcasting system. Specifically, Shibata teaches receiving information at a second entity and starting a counting device upon receipt [col. 7 lines 38-41, col. 8 lines 22-27]. At the time of the invention, it would have been obvious to one of ordinary skill in the art to have modified the Du et al system with the starting of counter when receives information in order to automatically detects suspicious message without further examination.

Shibata further teaches the checking of the counting device [170 fig. 4A] and determining the elapsed time since the second timekeeping device received the information comparing the elapsed time to a predetermined threshold value T3 [180 fig. 4A]. However, Shibata is silent in teaching checking the status of the counting device every T2 seconds.

Mankovitz teaches another apparatus and method for communicating information between host and at least one broadcast station. Specifically, Mankovitz teaches checking the status of the counting device every T2 seconds [col. 33 lines 7-9]. At the time of the invention, it would have been obvious to one of ordinary skill in the art to have modified the Du et al/Shibata system with the periodically time checking of Mankovitz system in order to prevent the clock in the information node from drifting [col. 33 lines 9-10].

Mankovitz teaches if the elapsed time is greater than T3, making an indication that the second timekeeping device's time is unreliable [col. 33 lines 13-16].

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5. As per claim 2, Shibata teaches the information is inputted at least one in a day [T1 col. 7 lines 45-47]. Mankovitz teaches the method for periodically [T2] checking to see when the last time the clock has been updated [col. 33 lines 7-9]. At such, it would have been obvious to one of ordinary skill in the art at the time of the invention was made that if $T2 > T3$ then $T2 > T1$. The system of Du/Mankovitz/Shibata would be inoperable if the above time condition was not met.

6. As per claim 3, Shibata teaches the information is inputted at least one in a day [T1 col. 7 lines 45-47]. Mankovitz teaches the method for periodically [T2] checking to see when the last time the clock has been updated [col. 33 lines 7-9]. At such, it would have been obvious to one of ordinary skill in the art at the time of the invention was made that if $T2 < T3$ then $T2 < T1$. The system of Du/Mankovitz/Shibata would be inoperable if the above time condition was not met.

7. As per claim 4, Du et al teach the first device and the second device are the same [fig. 6].

8. As per claim 5, Shibata teaches each of the plurality of timekeeping devices restarts the counting device upon the receipt of a time update [120 fig. 4A].

9. As per claim 6, Du et al is silent in teaching the primary timekeeping device is a network switch or router. However, Du et al explicitly teach the primary timekeeping device is a network node [col. 3 lines 1-3]. At such, it would have been obvious to one of ordinary skill in the art

that Du et al's node encompasses the claimed switch or router because the functions performed by the switch or router does not affect the basis operation of the node.

10. As per claim 7, Du et al is silent in teaching the primary timekeeping device is Fibre Channel switch. However, Du et al explicitly teach the primary timekeeping device is a network node [col. 3 lines 1-3]. At such, it would have been obvious to one of ordinary skill in the art that Du et al's node encompasses the claimed Fibre Channel switch because the functions performed by the Fibre Channel switch does not affect the basis operation of the node.

11. As per claim 8, Du et al is silent in teaching the plurality of timekeeping devices are Fibre Channel switches. However, Du et al explicitly teach the pluralities of timekeeping devices are a network node [fig. 7]]. At such, it would have been obvious to one of ordinary skill in the art that Du et al's nodes encompasses the claimed Fibre Channel switches because the functions performed by the Fibre Channel switches does not affect the basis operation of the nodes.

12. As per claim 9, Du et al/Shibata/Mankovitz teach the method for distributed time in a network. As such, Du et al/Shibata/Mankovitz teaches the computer readable media encoded with program instructions for operating the system.

13. As per claim 10, Du et al teach a network switch for maintaining distributed time in a network having plurality of timekeeping devices, the network switch comprising:

an I/O mechanism for receiving a time update from an operator [fig. 3]; inherently, a first port for sending the time update across the network to a primary timekeeping entity [col. 4 lines 48-51];

inherently, a second port for receiving a broadcast time update from said primary timekeeping entity every T1 second [col. 5 line 55 to col. 6 line 2], the time update carry an indication of the current time [col. 6 lines 3-7];

However, Du et al is silent in teaching a counter for timing the age of the most recently received time update. Shibata teaches another system for distributing broadcast signal in a broadcasting system. Specifically, Shibata teaches a counter and counter restarting upon receipt of message [110, 120 fig. 4a]. See further discussion in claim 1;

Shibata further teaches the microprocessor [microcomputer 60 fig. 30] cause a status check upon counter every T2 seconds, cause a determination of the elapsed time since the second device received information, cause a comparison between the elapsed time and a predetermined threshold value T3 [col. 8 lines 50-58].

However, Shibata is silent in teaching the determination of the elapsed time since received the time update and cause an indication that the network switch is unsynchronized if the elapse time is greater than T3. Mankovitz teaches another apparatus and method for communicating information between host and at least one broadcast station. Specifically, Mankovitz teaches a microprocessor [914 fig. 12] periodically checking to see when the last time the clock has been updated. The controller compares the current date with the clock to the date of last clock update in the memory [col. 33 lines 7-12]. Comparison between the elapsed

tine and a predetermined threshold value T3 cause an indication that the network is unsynchronized if the elapsed time is greater than T3 [col. 33 lines 13-16].

At the time of the invention, it would have been obvious to one of ordinary skill in the art to have modified the Du et al/Shibata system with the determination of the clock and cause an indication that the network switch is unsynchronized if the elapse time is greater than T3 of Mankovitz system in order to prevent the node from operating with an inaccurate clock.

14. As per claim 11, see discussion in claim 2.
15. As per claim 12, see discussion in claim 3.
16. As per claim 13, see discussion in claim 4.
17. As per claim 14, see discussion in claim 5.
18. As per claim 15, see discussion in claim 6.
19. As per claim 16, see discussion in claim 7.
20. As per claim 17, see discussion in claim 9.

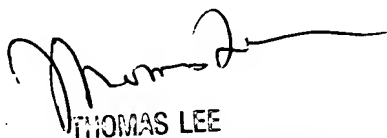
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vincent T. Tran whose telephone number is (571) 272-7210. The examiner can normally be reached on 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas c. Lee can be reached on (571) 272-3667. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Vincent Tran



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